## CLAIMS:

We claim:

1. An autonomic buffer configuration method comprising the steps of:

monitoring data flowing through buffers in a communications system;

recording in at least one buffer profile different data sizes for different ones of said data flowing through said buffers during an established interval of time;

computing an optimal buffer size based upon a specification of a required percentage of times a buffer must be able to accommodate data of a particular size; and,

re-sizing at least one of said buffers without re-initializing said at least one resized buffer.

2. The method of claim 1, wherein said recording step further comprises the step of varying delays between consecutive input/output operations in said communications system to affect how much data flows between said communications system and an application coupled to said communications system.

3. The method of claim 1, wherein said monitoring step comprises the step of monitoring said data for each connection in said communications system.

4. The method of claim 3, wherein said computing step comprises the step of computing an optimal buffer size sufficient to maintain long-lived communication.

5. The method of claim 4, further comprising the step of establishing a buffer size for newly opened connections in said communications system based upon said computed optimal buffer size.

6. A profile processor disposed within an autonomic buffer configuration system comprising:

a performance monitor arranged to monitor data flowing through at least one buffer in a communications system;

a reporting tool configured to generate at least one buffer profile based upon monitored information produced by said performance monitor;

a buffer size calculator programmed to compute an optimal buffer size for said at least one buffer based upon said at least one buffer profile; and,

a buffer resizing component coupled to said at least one buffer and programmed to dynamically resize said at least one buffer to said optimal buffer size without re-initializing said buffer.

7. The profile processor of claim 6, wherein said at least one buffer is selected from the group consisting of an application-level buffer and a kernel-level buffer.

8. The profile processor of claim 6, wherein said data comprises at least one of requests and responses to said requests.

9. The profile processor of claim 6, wherein said communications system is disposed within one of a Web server and an applications server.

10. The profile processor of claim 7, wherein said performance monitor comprises a configuration for performing an analysis of an amount of data passed between said application-layer buffer and said kernel-layer buffer.

11. The profile processor of claim 8, wherein said performance monitor comprises a configuration for performing at least one of (1) a statistical analysis of request sizes for an interval of time for said communications system, (2) a statistical analysis of request sizes for an interval of time for individual connections in said communications system, (3) a statistical analysis of inserting delay durations of varying lengths between consecutive input/output operations in said communications system, and (4) a statistical analysis of patterns of requests and an ordering of said requests in said patterns.

12. The profile processor of claim 6, wherein said monitored information is weighted in said at least one buffer profile.

13. The profile processor of claim 6, further comprising a profile aggregator configured to combine individual buffer profiles to produce a single profile for use by said calculator in computing an optimal buffer size.

14. A machine readable storage having stored thereon a computer program for autonomic buffer configuration, the computer program comprising a routine set of instructions which when executed by the machine cause the machine to perform the steps of:

monitoring data flowing through buffers in a communications system;

recording in at least one buffer profile different data sizes for different ones of said data flowing through said buffers during an established interval of time;

computing an optimal buffer size based upon a specification of a required percentage of times a buffer must be able to accommodate data of a particular size; and,

re-sizing at least one of said buffers without re-initializing said at least one resized buffer.

15. The machine readable storage of claim 14, wherein said recording step further comprises the step of varying delays between consecutive input/output operations in said communications system to affect how much data flows between said communications system and an application coupled to said communications system.

16. The machine readable storage of claim 14, wherein said monitoring step comprises the step of monitoring said data for each connection in said communications system.

17. The machine readable storage of claim 16, wherein said computing step comprises the step of computing an optimal buffer size sufficient to maintain long-lived communication.

18. The machine readable storage of claim 17, further comprising the step of establishing a buffer size for newly opened connections in said communications system based upon said computed optimal buffer size.